

Application No.: 10/523,627

Advisory Action dated: October 12, 2006

Response to Advisory Action dated: October 31, 2006

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### AMENDMENTS TO THE CLAIMS

Please replace all previous versions of the claims with the following listing:

1 – 9. (Cancelled)

10. (Currently Amended) ~~The gas fuel supply system as defined in claim 9,~~  
A gas fuel supply system for supplying gas fuel to an internal combustion engine, comprising:

a fuel supply passage for supplying the gas fuel to an injector; and  
source pressure control means for controlling pressure of the gas fuel  
supplied to the injector through the fuel supply passage by using negative  
pressure in an intake pipe such that the pressure of the gas fuel increases if  
the negative pressure in the intake pipe decreases, and the pressure of the gas  
fuel decreases if the negative pressure in the intake pipe increases;

wherein the source pressure control means comprises a diaphragm  
type regulator provided in the fuel supply passage, and a negative pressure  
supplying passage which connects a diaphragm chamber of the regulator to  
the intake pipe;

wherein a throttle valve is provided in the intake pipe for adjusting an  
amount of intake air, and the negative pressure supplying passage connects  
the diaphragm chamber of the regulator to a downstream side of the throttle  
valve in the intake pipe; and

wherein the regulator is a two-stage type regulator comprising a high-  
pressure regulator and a low-pressure regulator disposed at a downstream  
side of the high-pressure regulator, and the negative pressure supplying  
passage connects respective diaphragm chambers of the high-pressure  
regulator and the low-pressure regulator to the intake pipe.

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11. (Currently Amended) ~~The gas fuel supply system as defined in claim 9,~~  
A gas fuel supply system for supplying gas fuel to an internal combustion engine, comprising:

a fuel supply passage for supplying the gas fuel to an injector; and  
source pressure control means for controlling pressure of the gas fuel  
supplied to the injector through the fuel supply passage by using negative  
pressure in an intake pipe such that the pressure of the gas fuel increases if  
the negative pressure in the intake pipe decreases, and the pressure of the gas  
fuel decreases if the negative pressure in the intake pipe increases;

wherein the source pressure control means comprises a diaphragm  
type regulator provided in the fuel supply passage, and a negative pressure  
supplying passage which connects a diaphragm chamber of the regulator to  
the intake pipe;

wherein a throttle valve is provided in the intake pipe for adjusting an  
amount of intake air, and the negative pressure supplying passage connects  
the diaphragm chamber of the regulator to a downstream side of the throttle  
valve in the intake pipe; and

wherein the regulator is a two-stage type regulator comprising a high-pressure regulator and a low-pressure regulator disposed at a downstream side of the high-pressure regulator, and the negative pressure supplying passage connects a diaphragm chamber of the low-pressure regulator to the intake pipe.

12. (Cancelled)

Application No.: 10/523,627

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13. (Currently Amended) ~~The gas fuel supply system as defined in claim 6,~~  
A gas fuel supply system for supplying gas fuel to an internal combustion engine, comprising:

a fuel supply passage for supplying the gas fuel to an injector; and  
source pressure control means for controlling pressure of the gas fuel  
supplied to the injector through the fuel supply passage by using negative  
pressure in an intake pipe such that the pressure of the gas fuel increases if  
the negative pressure in the intake pipe decreases, and the pressure of the gas  
fuel decreases if the negative pressure in the intake pipe increases;

wherein the source pressure control means comprises a flow rate control valve which is provided in the fuel supply passage and comprises a valve element for opening and closing a passing hole for the gas fuel, a negative pressure receiving part connected to the valve element, a negative pressure applied chamber defined in a back side of the negative pressure receiving part, and an adjustment spring for urging the valve element in a closing direction, wherein the pressure in the negative pressure applied chamber acts to move the valve element in an opening direction, and a negative pressure supplying passage connects the negative pressure applied chamber of the flow rate control valve to the intake pipe.

14. (Previously Presented) The gas fuel supply system as defined in claim 13, wherein a throttle valve is provided in the intake pipe for adjusting an amount of intake air, and the negative pressure supplying passage connects the negative pressure applied chamber of the flow rate control valve to a downstream side of the throttle valve in the intake pipe.

15. (Previously Presented) The gas fuel supply system as defined in claim 14, wherein a regulator for decompressing the pressure of the gas fuel to a predetermined pressure is provided in the fuel supply passage, and the flow rate control valve is provided in a downstream side of the regulator in the fuel supply passage.

16 – 17. (Cancelled)